IN THE SPECIFICATION

The paragraph beginning at p. 3, line 16 is amended as follows:

A medical article, comprising an implantable substrate having a coating deposited on the substrate is provided, the coating emprises comprising a polymer, the polymer being a product of co-polycondensation of a diketene acetal and a diol. Diketene acetal can be selected a compound having formula (I) or (II):

$$R - CH = C - CH_{2}C - CH_{2} - CH_{2}$$

$$C - CH - R_{1}$$

$$CH - R_{2} - CH - R_{2}$$

wherein R, R₁, R₃ and are, independently, unsubstituted unsubstituted or substituted straight-chained, branched, or cyclic alkyl radicals C₁-C₈, or unsubstituted unsubstituted or substituted aryl radicals; and R₂ is a straight chain or branched C₁ to C₁₆ alkyl group or a straight chain or branched C₁ to C₁₆ alkyl group containing an ether group. Examples of diketene acetals that can be used of include 3,9-diethylidene-2,4,8,10-tetraoxaspiro-[5,5]-undecane, 3,9-dipentylidene-2,4,8,10-tetraoxaspiro-[5,5]-heptadecane, 3,9-dibutylidene-2,4,8,10-tetraoxaspiro-[5,5]-pentadecane, 3,9-dipropylidene-2,4,8,10-tetraoxaspiro-[5,5]-tridecane, and mixtures thereof. The coating of can additionally include a second polymer that is a product of co-polycondensation of the diketene acetal, the diol, and a hydroxylated functional compound.

The paragraph beginning at p. 4, line 12 is amended as follows:

A medical device is provided, the. The medical article includes a coating comprising a polymer including a unit having a formula:

HO
$$R_3$$
 O CH_2 CH_2 O CH_2 CH_2 O CH_2 CH_2

wherein R and R₁ are, independently, unsusbstituted unsubstituted or substituted straight-chained, branched, or cyclic alkyl radicals C₁-C₈, or unsusbstituted unsubstituted or substituted aryl radicals; R₃ is an aliphatic, cycloaliphatic, aromatic, or organosilicon group; and "w" and "z" are integers, where the value of "w" is between 1 and 40, the value of "z" is between 9 and 700. The coating can further comprise a polymer having a formula

wherein R_2 –O is a non-fouling moiety derived from a hydroxylated functional compound; R_3 is an aliphatic or cycloaliphatic group; "m," "n," "p," and "q" are all integers, where the value of "m" is between 5 and 500, the value of "n" is between 2 and 350, the value of "p" is between 1 and 20, and the value of "q" is between 10 and 550.

The paragraph beginning at p. 5, line 6 is amended as follows:

A method for fabricating a coating for an implantable medical device is provided, the.

The method comprises applying a polymer onto the surface of the device, wherein the polymer comprises a product of co-polycondensation of a diketene acetal and a diol.

The paragraph beginning at p. 7, line 10, is amended as follows:

Diketene acetals are monomeric building blocks that include two reactive centers capable of reacting with two hydroxy functional molecules, and therefore, can serve as linking agents.

One family of diketene acetals that can be used include the compounds having a general formula

(I):

$$\begin{array}{c|cccc} O-H_2C & CH_2-O \\ \hline R-CH=C & C & C=CH-R_1 \\ \hline O-H_2C & CH_2-O \end{array} \tag{I}$$

where R and R_1 are, independently, unsubstituted unsubstituted or substituted straight-chained, branched, or cyclic alkyl radicals C_1 - C_8 , or unsubstituted unsubstituted or substituted aryl radicals.

The paragraph beginning at p. 8, line 1, is amended as follows:

In diketene acetals described by formula (II), R_1 and R_3 is each, independently, unsubstituted unsubstituted or substituted straight-chained, branched, or cyclic alkyl radicals C_1 - C_8 , or unsubstituted unsubstituted or substituted aryl radicals; R_2 is a straight chain or branched C_1 to C_{16} alkyl group, which can also contain ether groups.

6

Docket Number: 50623.267

The paragraph beginning at p. 11, line 4, is amended as follows:

Express Mail Label No: 339062358 US

Suitable hydroxylated functional compounds can be described by a general formula (V):

$$HO[-R_2-O-]_mH, (V)$$

where "m" is an integer, and $-R_2$ —O-represents the moiety of compound (IV \underline{V}) providing <u>for</u> non-fouling characteristics. For example, when compound (IV \underline{V}) is a poly(alkylene glycol), R_3 is the polymethylene structure $(CH_2)_x$, where "x" is an integer. To illustrate, when compound $(IV \underline{V})$ is PEG, x = 2.

The paragraph beginning at p. 12, line 1, is amended as follows:

To prepare polyorthoesters of Category II described above, to be used for fabricating of the optional finishing coat layer, a two-step synthetic process can be used. The first step includes reacting the whole amount of a diketene acetal, or a mixture of more than one diketene acetals, with a hydroxylated functional compound or a mixture of more than one hydroxylated functional compounds. The reaction ("reaction 1") can be conducted in anhydrous environment and the temperature can be between ambient temperature and about 80°C, for example, about 70°C.

Reaction 1 can be catalyzed by a strong base or acid such as *p*-toluenesulfonic acid. The second step includes adding a diol or a mixture of more than one diol to the product of reaction 1, and the temperature at which the second step can be conducted can be also between ambient temperature and about 80°C, for example, about 70°C. As a result of the two-step process described above, a polyorthoester can be obtained, the polyorthoester having a general formula (VII):

$$HO = \begin{bmatrix} R_2 - O \end{bmatrix}_{\substack{m \\ CH_2}} O - CH_2 CH_2 - O CH_2 -$$

(VII)

where R, R₁, R₂, and R₃ are as described above; "m," "n," "p," and "q" are all integers, where the value of "m" is between 5 and 500, the value of "n" is between 2 and 350, the value of "p" is between 1 and 20, and the value of "q" is between 10 and 550. The polyorthoester described by formula (VI) can have molecular weight within a range of between about 20,000 and about 200,000 Daltons.

8